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**REMARKS**

The undersigned Attorney of Record thanks the Examiner for the courtesy of a telephone interview with respect to the present application.

Claims 127-167 and 171-197 are rejected, under 35 U.S.C. § 103(a), as being unpatentable over Meade et al. '369 in view of Vermeglio et al. Claims 168-170 are rejected, under 35 U.S.C. § 103(a), as being unpatentable over Meade et al. '369 in view of Vermeglio et al., further in view of Harmer et al. '294. The Applicant reaffirms the arguments presented in the Remarks accompanying the response dated August 15, 2003, supplemented with the following discussion.

Claim 127 has been amended to define a nucleic acid oligomer attached to a ~~single~~ redox-active moiety, the redox-active moiety having an electron-donor molecule and an electron-acceptor molecule which are not joined by a nucleic acid oligomer. The Examiner has argued that the open-ended language of the claims ("comprising") would encompass structures such as those taught in the Meade et al. '369 reference, wherein a single nucleic acid oligomer attaches to a plurality of redox-active moieties. The claim as amended defines the structures taught in the present application, wherein the nucleic acid oligomer is attached to only one redox-active moiety, having both electron-donor and an electron-acceptor regions.

Turning to the combination of Meade et al. '369 and the Vermeglio reference, the Examiner has also requested clarification regarding the nature of the electron transfer (linear versus cyclic) with regard to that of the Vermeglio reference. The Vermeglio reference pertains to purple nonsulfur photosynthetic bacteria, which utilize a cyclic electron transfer mechanism as discussed in the Summary at line 20. However, as best the Applicant understands the Examiner's raised combination of Meade et al. '369 and Vermeglio in rejecting the present invention, the Applicant points out that the base claim 127 of the present application specifically recites ".....at least one electron-donor molecule and at least one electron-acceptor molecule, the at least one electron-donor molecule and the at least one electron-acceptor molecule not being joined by a nucleic acid oligomer". In other words, claim 127 does not

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contain or discuss any feature or recitation relating to a particular type of electron transfer to which the disclosure of either of the applied references either alone or in combination would particularly pertain.

In any event, in view of the above amended claim 127, even if the combination of Meade et al. '369 and the Vermeglio reference is proper, and this is not conceded hereby, such a combination whatever might be taught relative to electron transfer still fails to disclose, teach or even suggest all the presently claimed features of the claimed invention. Specifically, 'a modified nucleic acid oligomer comprising a nucleic acid oligomer attached to a single redox-active moiety.....".

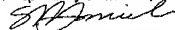
As the Applicant believes the above amendments to overcome the Examiner's rejections with respect to the cited references, and for purposes of brevity in the present After Final Response, no further discussion with respect to the other references is provided. The Applicant does however, incorporate by reference the arguments with respect to Meade et al. '369 Vermeglio and Harmer et al. '294 from the Applicant's previous responses.

As the remaining claims 128-197 are dependent either directly or indirectly upon claim 127 which is believed allowable in view of the foregoing, it is respectfully submitted that these raised obviousness rejections should also be withdrawn and this application is now placed in a condition for allowance. Action to that end, in the form of an early Notice of Allowance, is courteously solicited by the Applicant at this time.

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Respectfully submitted,



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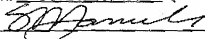
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